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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,562	06/19/2001	Robert Mays JR.	MYS-01-09-13	4586
7590 06/30/2004				
Kenneth C. Brooks P.O. Box 10417 Austin, TX 78766-1417			EXAMINER PAYNE, DAVID C	
			ART UNIT 2633	PAPER NUMBER

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/884,562	MAYS, ROBERT	
	Examiner	Art Unit	
	David C. Payne	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/8/02, 4/22/04</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because drawings are hand drawn and contain blank boxes and other shapes, which are not widely recognized engineering symbols. Applicant must supply a suitable legend. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The applicant must comply with the official rules and regulations of the U.S. Patent and Trademark Office; failure to do so may result in abandonment of the application. The following are direct quotations of 37 CFR 1.84(n), (o), repeated below:

- (n) *Symbols.* Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. **Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.**
  - (o) *Legends.* **Suitable descriptive legends may be used subject to approval by the Office, or may be required by the examiner where necessary for understanding of the drawing.** They should contain as few words as possible.
2. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as

“amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-5, 9-12, 16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erteza US 5,706,114 (Erteza).

Re claims 1, 9, 16 Erteza disclosed

associating a pair of plurality of computing environments with a pair of holographic transform functions (see Erteza e.g. col./line: 2/20-34), with said pair of holographic transform functions associated with said pair of computing environments differing from the pairs of holographic transform functions associated with the remaining pairs of computing

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environments of said plurality of computing environments (see Erteza e.g. col./line: 4/50-65); producing, with one of said plurality of optical sources of said pair of computing environments, optical energy modulated with data, defining modulated optical energy (see Erteza e.g. col./line: 3/28-50); transforming said modulated optical energy with one of said pair of holographic transform functions, defining transformed modulated optical energy; and sensing said data with the detector associated with the remaining computing environment of said pair of computing environments (see Erteza e.g. col./line: : 2/20-34).

Erteza does not disclose

broadcasting said transformed modulated optical energy into a volume by reflecting said transformed modulated optical energy from a body having a conically shaped body; It would have been obvious to one of ordinary skill in the art at the time of invention that optical energy flows out from a light source in a canonical shape since light originates a finite point and disperses evenly from a central point producing a cone shape.

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Re claims 3, 18, 20 Erteza disclosed

wherein broadcasting said transformed modulated optical energy into a volume further includes dispersing said transformed modulated optical energy into said volume by reflecting said transformed modulated optical energy from a reflective surface (see Erteza e.g. col./line: : 3/34-40).

Re claims 4, 10, 11, 19 Erteza does not disclose

wherein broadcasting said transformed modulated optical energy into a volume further

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includes propagating a toroidal sheet of transformed modulated optical energy into said volume by reflecting said transformed modulated optical energy from a surface having a hyperbolic shape. It would have been obvious to one of ordinary skill in the art at the time of invention that the toroid shape is merely a canonical dispersion of light. Furthermore, It would have been obvious to one of ordinary skill in the art at the time of invention that optical energy flows out from a light source in a canonical shape since light originates a finite point and disperses evenly from a central point producing a cone shape.

Re claims 5, 12 Erteza disclosed

wherein broadcasting said transformed modulated optical energy into a volume further includes radiating said transformed modulated optical energy into said volume over a plurality of directions by reflecting said transformed modulated optical energy from a surface having a plurality of planar regions formed thereon (see polyhedron shapes of Figure 2, col./line: 3/28-31).

5. Claims 2, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erteza US 5,706,114 (Erteza) in view of Labeyrie US 6,044,102 A (Labeyrie).

Re claims 2, 17 Erteza does not disclose

wherein sensing said data energy further includes performing an inverse transform on said transformed modulated optical energy, with one of said pair of holographic transform functions associated with said pair of computing environments, before sensing said

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modulated optical, to retrieve said modulated optical energy.

Labeyrie disclosed

using an inverse holographic transform on a signal. It would have been obvious to one of ordinary skill in the art at the time of invention use an inverse transform on said modulated energy to translate the signal from optical to electrical form as discussed in Labeyrie (see col./line: 3/40-45).

6. Claims 6-8, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erteza US 5,706,114 (Erteza) in view of Acampora US 6,049,593 (Acampora).

Re claims 6, 13, Erteza does not disclose

wherein one of said pair of computing environments is located in a first building and the remaining computing environments is located in a second building, spaced-apart from said first building.

Acampora disclosed a wireless network that can be used intra-building and from building to vehicle (see e.g., Acampora col./line: 3/64-<sup>67</sup>~~64~~, 4/12-16). It would have been obvious to one of ordinary skill in the art at the time of invention to place the holographic transceivers in various locations as claimed since it is well known that information is transferred between sites such as building and with mobile users such as in vehicles.

Re claims 7, 14 Erteza does not disclose

wherein one of said pair of computing environments is located in a building and the



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remaining computing environments is located in a vehicle.

Acampora disclosed a wireless network that can be used intra-building and from building to vehicle (see e.g., Acampora col./line: 3/64-<sup>67</sup>~~64~~, 4/12-16). It would have been obvious to one of ordinary skill in the art at the time of invention to place the holographic transceivers in various locations as claimed since it is well known that information is transferred between sites such as building and with mobile users such as in vehicles.

Re claims 8, 15 Erteza does not disclose

wherein one of said pair of computing environments is located in a first vehicle and the remaining computing environments is located in a second vehicle, spaced-apart from said first building.

Acampora disclosed a wireless network that can be used intra-building and from building to vehicle (see e.g., Acampora col./line: 3/64-<sup>67</sup>~~64~~, 4/12-16). It would have been obvious to one of ordinary skill in the art at the time of invention to place the holographic transceivers in various locations as claimed since it is well known that information is transferred between sites such as building and with mobile users such as in vehicles.

### ***Conclusion***

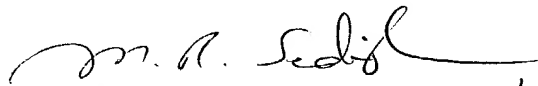
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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp

  
M.R. SEDIGHIAN  
Primary Examiner  
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